2

Data Exchange Environment

2.0   Data Exchange Environment

2.1   Why IRWIN

Over the years' multiple studies and analyses have been completed, looking at dispatch efficiencies and the availability of consistent wildland fire occurrence data. Results identified the need for a more integrated approach to managing wildland fire occurrence data and a solution was created in the form of Integrated Reporting of Wildland Fire Information (IRWIN) facilitating the sharing of data in an exchange environment.

Prior to the data exchange environment, fire applications operated in a disconnected, siloed world - meaning data was entered into unique systems that did not share data. Often, basic fire information - like location, size, environmental conditions, and resources - was repeatedly entered into stand-alone systems as a foundation for their capabilities. An example set of data elements is the location of a fire (latitude/longitude). A 2008 interagency efficiency report identified that an interagency dispatcher may enter this data up to 26 times in different systems over the life of an incident - and each system may still have a different answer! Once the dispatcher received what was needed from each system, they may not have had time to go back and update each system when better location information became available. As conditions changed over the life of an incident, more recent and accurate information was entered into operational systems, while the original, outdated data remained in the original supporting systems.

When questions arose about individual fires, there were often multiple answers depending upon which system was queried. Users tended to refer to systems they were most familiar with and consequently, may not have accessed the most up to date data available. While all of the answers may have been valid in their specific context, there was no authoritative data source for a consistent answer. This presented a challenge for any user tasked with providing wildland fire incident occurrence data to the customers they served – the interagency fire community and line management at all levels of fire management agencies and departments.

2.2   What Does IRWIN Do

IRWIN is a Wildland Fire Information and Technology (WFIT) affiliated investment intended to provide "end–to–end" fire reporting capability. IRWIN has been tasked with providing data exchange capabilities between existing applications used to manage data related to wildland fire incidents. By interconnecting systems, new and updated information is automatically available to different interagency systems and to a dashboard to provide queries and reports. This capability supports a number of needs and provides benefits throughout the wildland fire community, which include:

1. Allows consistent reporting of data,
2. Reduces the duplicate entry of data,
3. Identifies authoritative sources of data,
4. Speeds access to data located in diverse source systems,
5. Increases data accuracy, and
6. Increases the availability of data.

Fire reporting is a key function of wildland fire management and can impact many other processes and systems of the wildland fire enterprise, including: Operations, Logistics, Intelligence, Information, Planning, and Research.

The initial implementation of IRWIN was in May of 2014, with a limited number of systems. Additional systems continue to connect to the environment as the understanding of IRWIN's capability – access to a plethora of consistent real-time incident data - becomes more widespread.

2.3   How Does IRWIN Facilitate Data Exchange

To facilitate data sharing, IRWIN provides a common data exchange capability across all participating functional areas for capturing, reporting, and sharing event/incident information. It is an objective for IRWIN to facilitate data integration services among systems to support near-time availability of new and updated information to the relevant interagency systems.

Additional sections address the mechanics.

2.4   Participating Systems

Systems interact with the data exchange environment in one of three ways.

CAD: System displays and modifies data – includes more required fields than a Read/Write system.

Read/Write: System displays and modifies data - includes CAD "lite" systems*.

Read-Only: System displays data and does not modify it.

Table 1. Systems Participating in Data Exchange via IRWIN

CAD	Read/Write	Read-Only
Dispatch Tracker	Emergency Response	Colorado Joint Incident Briefing Report
FireBeans	FireCode	Colorado Division of Fire Prevention and Control
Integrated Fire Management (IFM)	ICS209	Enterprise Geospatial Portal (EGP)
WildcAD	LA County	e-Isuite
WIRES	WFDSS	GeoMAC
		Incident Risk Control – QA Tool
		Keno Fire Protection District
		Remote Sensing Applications Center (RSAC)
		Situation Analyst, Montana
		Smart Fire
		State of Utah
		Ventura County

*A CAD Lite functions similarly to a CAD, but does not contain all the data elements found in a CAD and therefore does not have the same required data elements for the initial creation of an incident record.